

What is claimed is:

1. An Internet telephone system, comprising:

an Internet terminal device that is capable of connecting with the Internet and transmitting and receiving audio signals for a voice communication, said Internet terminal device having a communication unit through which the audio signals are transmitted to/received from the Internet, said Internet terminal device being provided with a first interface through which the audio signals for the voice communication are output/input;

a multifunction device including at least a telephone function and an Internet telephone function,

said multifunction device having:

a sound input/output unit:

a second interface that interfaces between the sound input/output unit and said first interface so that the Internet telephone function is realized;

a third interface that interfaces between the sound input/output unit and a public telephone network so that the telephone function is realized; and

a switching system that switches said second interface and said third interface depending on whether the telephone function is used or the Internet telephone function is used.

2. The Internet telephone system according to claim 1, wherein said first interface and said second interface perform a wireless communication.

3. The Internet telephone system according to claim 1, wherein said first interface and said second interface perform a wired communication.

4. The Internet telephone system according to claim 1, further provided with a cordless handset which performs a wireless communication with said multifunction device.

5. A telephone device having a telephone line terminal to connect with the telephone network and a voice input/output unit for a voice communication, an audio signal being transmitted/received, through said telephone line terminal and the telephone network, to/from another telephone terminal, said telephone device comprising:

a first audio signal input/output terminal connected with an Internet terminal device, the Internet terminal device being connected with another Internet terminal device through the Internet, the Internet terminal device transmitting/receiving audio signals for a voice communication with the another Internet terminal device through the Internet in accordance with an Internet telephone executing command signal that is

externally input to the Internet terminal device;

a first control signal input/output terminal that is connected with the Internet terminal device and transmitting/receiving control signals including the Internet telephone executing command signal;

a first command input system that is operated by a user to input an Internet telephone starting command to said telephone terminal;

an audio signal route switching system that switches a source/destination of the audio signal received/transmitted through said voice input/output device from said telephone line terminal to said first audio signal input/output terminal when the Internet telephone starting command is input through said first command input system; and

an Internet terminal device controlling system that controls said first control signal input/output terminal to output the Internet telephone executing command to the Internet terminal device so that the audio signal is transmitted/received between the Internet terminal device and another Internet terminal device.

6. The telephone device according to claim 5, wherein said first command input system is configured to input terminal device information indicative of the another Internet terminal device with which the Internet terminal device communicates,

and

wherein said Internet terminal device controlling system controls said first control signal input/output terminal to transmit the terminal device information to the Internet terminal device so that the Internet terminal device makes a call to the another Internet terminal device when the terminal information of the another Internet terminal device is input through said operable member.

7. The telephone device according to claim 5, further including a second command input system that is operated by the user to input a terminating command for terminating the Internet telephone, said Internet terminal device controlling system controls said first control signal input/output terminal to output an Internet telephone terminating command to the Internet terminal device so as to terminate the transmission/reception of the audio signals between the Internet terminal device and the another Internet terminal device when the terminating command is input through said second command input system.

8. The telephone device according to claim 5, further including a notifying system which notifies that a ringing signal that is a call to the telephone device is transmitted from the Internet terminal device.

9. The telephone device according to claim 5, further comprising:

a voice data storing device that stores voice data for guidance messages to be transmitted to a terminal device that makes a call to said telephone device;

an audio guidance setting system that is operated by the user to set whether to reproduce an audio signal from the voice data stored in said voice data storing device and transmits the reproduced audio signal to the another terminal device that makes a call to said telephone device;

an audio guidance transmitting system that controls said first audio signal input/output terminal to transmits the voice data stored in said voice data storing device to the Internet terminal device so that the Internet terminal device transmits the audio signal to the another Internet terminal with which the telephone device communicates when it is set, with the audio guidance setting system, to transmit the audio signal to the another terminal device that makes a call to said telephone device.

10. The telephone device according to claim 5, further including a cordless terminal device which functions as said voice input/output device.

11. The telephone device according to claim 10, further

includes:

an interruption condition detection system that detects an interrupting condition that a wireless communication using said cordless terminal device is to be interrupted; and

an interruption notifying system that transmits an audio signal for notifying that the wireless communication is interrupted to the another Internet terminal device that is switched to as the destination by said audio signal route switching system when said interruption condition detection system detects that the interrupting condition is satisfied.

12. The telephone device according to claim 11, wherein said cordless terminal device is configured to transmits a remaining capacity of a battery that supplies power to said cordless terminal device to said interruption condition detection system, and wherein said interruption condition detection system detects that the interruption condition is satisfied when the remaining capacity of the battery is equal to or less than a predetermined threshold value.

13. The telephone device according to claim 11, wherein said interruption condition detection system is capable of detecting a radio field intensity of an electromagnetic wave said cordless terminal device receives for the wireless communication, said interruption condition detection system detecting that the

interruption condition is satisfied when the radio field intensity of the electromagnetic wave is equal to or less than a predetermined threshold value.

14. An Internet terminal device connected with another Internet terminal device through the Internet, said Internet terminal device comprising:

an audio signal input/output system that transmits/receives an audio signal for a voice communication with a telephone device;

a control signal input/output terminal that is connected with the telephone device and transmits/receives control signals including the Internet telephone executing command signal from/to the telephone device; and

an Internet terminal device controlling system that control said Internet terminal device such that the audio signal received from the telephone device is transmitted to another Internet terminal device through the Internet and the audio signal received through another Internet terminal device through the Internet is transmitted to the telephone device when the Internet telephone executing command is received from the telephone device through said control signal input/output terminal.

15. The Internet terminal device according to claim 14,

wherein when terminal data designating an Internet terminal device to be connected with is input to said control signal input/output terminal in addition to the Internet telephone executing command, said Internet terminal device controlling system controls said audio signal input/output system to call another Internet terminal device corresponding to the terminal data, the audio signal for the voice communication being transmitted to/received from the another Internet terminal device.

16. The Internet terminal device according to claim 15, wherein when an Internet telephone terminating command is input to said control signal input/output terminal from the telephone device during operation of said audio signal input/output system, said Internet terminal device controlling system terminates the input/output of the audio signal of said audio signal input/output system with the another Internet terminal device.

17. The Internet terminal device according to claim 14, wherein when a ringing tone signal for the Internet telephone communication is transmitted from another Internet terminal device through the Internet, said Internet terminal device controlling system transmits the ringing tone signal to said telephone device through said control signal input/output



terminal.

18. An Internet telephone system having a telephone device and an Internet terminal device,

said telephone device having:

a telephone line terminal to connect with the telephone network and a voice input/output unit for a voice communication, an audio signal being transmitted/received, through said telephone line terminal and the telephone network, to/from another telephone device;

a first audio signal input/output terminal connected with said Internet terminal device, said Internet terminal device being connected with another Internet terminal device through the Internet, the Internet terminal device transmitting/receiving audio signals for a voice communication with said another Internet terminal device through the Internet in accordance with an Internet telephone executing command signal that is externally input to the Internet terminal device;

a first control signal input/output terminal that is connected with said Internet terminal device and transmits/receives control signals including the Internet telephone executing command signal;

a first command input system that is operated by a user to input an Internet telephone starting command to said telephone terminal;

an audio signal route switching system that switches a source/destination of the audio signal received/transmitted through said voice input/output device from said telephone line terminal to said first audio signal input/output terminal when the Internet telephone starting command is input through said first command input system; and

an Internet terminal device controlling system that controls said first control signal input/output terminal to output the Internet telephone executing command to the Internet terminal device so that the audio signal is transmitted/received between the Internet terminal device and another Internet terminal device,

said Internet terminal device comprising:

a second audio signal input/output terminal which is connected with the first audio signal input/output terminal;

an audio signal input/output system that transmits/receives an audio signal for a voice communication to/from said telephone device through said second audio signal input/output terminal;

a second control signal input/output terminal that is connected with said first control signal input/output terminal of the telephone device and transmits/receives control signals including the Internet telephone executing command signal from/to said telephone device; and

an Internet terminal device controlling system that

controls said Internet terminal device such that the audio signal received from said telephone device is transmitted to the another Internet terminal device through the Internet and the audio signal received through the another Internet terminal device through the Internet is transmitted to said telephone device when the Internet telephone executing command is received from said telephone device through said second control signal input/output terminal.

19. A method of controlling a telephone device in accordance with an Internet telephone starting command, the telephone device having a telephone line terminal to connect with the telephone network, a voice input/output unit for a voice communication, a first audio signal input/output terminal through which an audio signal for the voice communication is input to/output from an Internet terminal device, a first control signal input/output terminal through which control signals are input to/output from the Internet terminal device, the method comprising the steps of:

switching a destination of the audio signal input through the voice input/output unit and a source of the audio signal output through the voice input/output unit from the telephone line terminal to the first audio signal input/output terminal in accordance with the input of the Internet telephone starting command; and

controlling the Internet terminal device to transmit/receive the audio signal to/from another Internet terminal device by controlling the telephone device to transmits the Internet telephone starting command to the Internet terminal device through the first control signal input/output terminal upon receipt of the Internet telephone starting command.

20. A method of controlling the Internet terminal device, the Internet terminal device being connected with another Internet terminal device through the Internet, the Internet terminal device including an audio signal input/output system that transmits/receives an audio signal for a voice communication with a telephone device, a control signal input/output terminal that is connected with the telephone device and transmits/receives control signals including the Internet telephone executing command signal from/to the telephone device, the method having a step of controlling the Internet terminal device such that the audio signal received from the telephone device is transmitted to another Internet terminal device through the Internet and the audio signal received through another Internet terminal device through the Internet is transmitted to the telephone device when the Internet telephone executing command is received from the telephone device through said control signal input/output terminal.

21. An Internet telephone system having a telephone device and an Internet terminal device,

said telephone device having:

a telephone line terminal to connect with the telephone network and a voice input/output unit for a voice communication, an audio signal being transmitted/received, through said telephone line terminal and the telephone network, to/from another telephone device;

a first wireless communication interface that transmits/receives signals with a wireless communication, the signals transmitted/received through said wireless communication including an audio signal for a voice communication and control signals including an Internet telephone executing command signal, the Internet telephone executing command being transmitted to said telephone device when the Internet telephone communication is started;

an audio signal route switching system that switches a source/destination of the audio signal received/transmitted through said voice input/output device from said telephone line terminal to said first wireless communication interface when the Internet telephone communication is performed,

said Internet terminal device having:

a second wireless communication interface that transmits/receives signals to/from said first wireless communication interface; and

an Internet terminal device controlling system that controls said Internet terminal device such that the audio signal received from said telephone device through said first and second wireless communication interfaces is transmitted to an another Internet terminal device through the Internet and the audio signal received through the another Internet terminal device through the Internet is transmitted to said telephone device through said first and second wireless communication interfaces when the Internet telephone executing command is received from said telephone device through said first and second wireless communication interfaces.

22. The telephone device according to claim 21,

wherein said telephone terminal is provided with a first command input system that is operated by a user to input an Internet telephone starting command to said telephone terminal, said first command input system being configured to input terminal device information indicative of the another Internet terminal device with which the Internet terminal device communicates, and

wherein said Internet terminal device controlling system controls said first wireless communication interface and said second wireless communication interface to transmit the terminal device information to the Internet terminal device so that the Internet terminal device makes a call to the another

Internet terminal device when the terminal information of the another Internet terminal device is input through said operable member.

23. The telephone device according to claim 21, further including a second command input system that is operated by the user to input a terminating command for terminating the Internet telephone, said Internet terminal device controlling system controls said first wireless communication interface to output an Internet telephone terminating command to the Internet terminal device through said second wireless communication interface so as to terminate the transmission/reception of the audio signals between the Internet terminal device and the other Internet terminal device when the terminating command is input through said second command input system.

24. The telephone device according to claim 21, further including a cordless terminal device which functions as said voice input/output unit.

25. The telephone device according to claim 24, further includes:

an interruption condition detection system that detects an interrupting condition that a wireless communication using said cordless terminal device is to be interrupted; and

an interruption notifying system that transmits an audio signal for notifying that the wireless communication is interrupted to the another Internet terminal device that is switched to be a destination by said audio signal route switching system when said interruption condition detection system detects that the interrupting condition is satisfied.

26. The telephone device according to claim 25, wherein said cordless terminal device is configured to transmits a remaining capacity of a battery that supplies power to said cordless terminal device to said interruption condition detection system, and wherein said interruption condition detection system detects that the interruption condition is satisfied when the remaining capacity of the battery is equal to or less than a predetermined threshold value.

27. The telephone device according to claim 25, wherein said interruption condition detection system is capable of detecting a radio field intensity of an electromagnetic wave said cordless terminal device receives for the wireless communication, said interruption condition detection system detecting that the interruption condition is satisfied when the radio field intensity of the electromagnetic wave is equal to or less than a predetermined threshold value.



28. A telephone terminal that realizes a voice communication by inputting/outputting voice using a voice input/output device in accordance with an audio signal transmitted through a telephone line network, said telephone terminal comprising:

an audio signal input/output path through which the audio signal is exchangeable with an external device; and

a route switching system that switches, in accordance with an operation of a user, a source of the audio signal input to said voice input/output device and a destination of the audio signal output from said voice input/output device to said audio signal input/output path.

29. The telephone terminal according to claim 28, further comprising an audio signal detecting system that detects the audio signal is input through said audio signal input/output path, wherein said route switching system switches the source of the audio signal input to said voice input/output device and the destination of the audio signal output from said voice input/output device to said audio signal input/output path only when the operation by the user is performed when said audio signal detecting system is detecting the audio signal is input through said audio signal input/output path.

30. The telephone terminal according to claim 29, further comprising a first notifying system that notifies that the audio

signal is input during a period from a detection of the audio signal by said audio signal detecting system to the switching of the source and the destination to said audio signal input/output path by said route switching system.

31. The telephone terminal according to claim 30, further comprising a ringing tone output system that outputs a ringing tone upon receiving a call from the telephone line network, said first notifying system notifying by controlling the ringing tone output system to output the ringing tone.

32. The telephone terminal according to claim 29, wherein said route switching system switches the source and the destination to said audio signal input/output path when the user performs an operation to start the voice communication during a period in which said audio signal detecting system detects the audio signal, said route switching system switches the source and the destination to said telephone line network when the user performs an operation to terminate the voice communication.

33. The telephone terminal according to claim 32, further comprising a second notifying system that notifies that the audio signal is input if said audio signal detecting system detects the audio signal is input after said route switching

system switched the source and the destination of the audio signal to said telephone line network.

34. The telephone terminal according to claim 28, which is provided with a cordless terminal functioning as said voice input/output device with a wireless communication.

35. The telephone terminal according to claim 34, further comprises:

an interruption condition detecting system that detects a predetermined condition for interrupting the wireless communication using said cordless terminal; and

a interruption notifying system that transmits an audio signal for notifying that the wireless communication is to be interrupted to the destination currently switched to by said route switching system when said interruption condition detecting system detects that the predetermined condition is satisfied.

36. The telephone device according to claim 35, wherein said cordless terminal device is configured to transmits a remaining capacity of a battery that supplies power to said cordless terminal device to said interruption condition detection system, and wherein said interruption condition detection system detects that the interruption condition is satisfied when the

remaining capacity of the battery is equal to or less than a predetermined threshold value.

37. The telephone device according to claim 35, wherein said interruption condition detection system is capable of detecting a radio field intensity of an electromagnetic wave said cordless terminal device receives for the wireless communication, said interruption condition detection system detecting that the interruption condition is satisfied when the radio field intensity of the electromagnetic wave is equal to or less than a predetermined threshold value.

38. An Internet telephone system configured such that an Internet terminal having a Internet telephone function, comprising a telephone terminal connected to said Internet terminal, said telephone terminal capable of realizing a voice communication by inputting/outputting voice using a voice input/output device in accordance with an audio signal transmitted through a telephone line network, said telephone terminal further comprising:

- an audio signal input/output path through which the audio signal is exchangeable with an external device;

- a route switching system that switches, in accordance with an operation of a user, a source of the audio signal input to said voice input/output device and a destination of the audio

signal output from said voice input/output device to said audio signal input/output path.

39. The Internet telephone system according to claim 38, wherein said telephone terminal further comprises an audio signal detecting system that detects the audio signal is input through said audio signal input/output path, wherein said route switching system switches the source of the audio signal input to said voice input/output device and the destination of the audio signal output from said voice input/output device to said audio signal input/output path only when the operation by the user is performed when said audio signal detecting system is detecting the audio signal is input through said audio signal input/output path.

40. A computer accessible recording medium containing a program to be executed by a computer to realize a function of a telephone terminal to perform a voice communication by inputting/outputting voice using a voice input/output device in accordance with an audio signal transmitted through a telephone line network, the program defining a process of switching a source of the audio signal input to said voice input/output device and a destination of the audio signal output from said voice input/output device to an audio signal input/output path through which the audio signal is

exchangeable with an external device.